

REMARKS

I. Status of the Application

By the present Reply, the Applicant is amending claims 1-3, 5, 7, 8, 10, and 13. No new matter is added. Claims 1-13 are currently pending in the application. Claims 1-13 have been rejected. The present Reply addresses each point of objection and rejection raised in the Office Action. Favorable reconsideration is respectfully requested.

II. Objection to the Claims

The Office Action has objected to claims 1, 2, 3, 8, and 13 because of alleged informalities. Regarding claims 1, 3, and 13, the Office Action states that the recital of “first substance data” and “second substance data” is confusing, and suggests removing these terms from the claims. Accordingly, the Applicant is amending claims 1-3, 5, 7, 10, and 13 to replace “first substance data” with “initial substance data,” and to replace “second substance data” with “update substance data.”

With further regard to claims 1, 3, and 13, the Office Action states:

It is confusing when “second substance data” in the update database is moved (i.e. update or transfer) to the primary database. Will “second substance data” now be called “first substance data” or “second substance data?” Or will “second substance data” be still called “second substance data?”

Office Action, page 3. The Applicant notes that the update substance data (previously the “second substance data”) are not moved to a primary database (e.g. the initial search data). Instead, as recited in claim 1, the update substance

data are stored “separately from the initial search data and without updating a set of the initial substance data in the initial search data or adding a set of initial substance data to the initial search data” (emphasis added). Accordingly, the initial search data and the update search data are maintained in separate databases. The initial search data and the update search data are also searched separately. For example, claim 1 recites performing two separate searches “by using a tree-based search based on the search tree data of the initial search data and an index-based search using the index of the update substance data.”

With regard to claim 8, the Office Action states that the meaning of the “non-target index” is unclear. The Applicant is amending claim 8 to clarify that the non-target index indicates that “the non-target index indicates that each set of update search data that includes the non-target index is not to be compared in a subsequent index-based search.” Support for this amendment can be found at least in paragraphs [0045] and [0057] of the original specification.

III. Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-5 and 9-13 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Publication No. 2002/0013658 to Tanaka et al. (“Tanaka”) in view of U.S. Publication No. 2003/0028316 to Miyahara (“Miyahara”), U.S. Publication No. 2002/0052894 to Bourdoncle et al. (“Bourdoncle”), and U.S. Patent No. 6,980,907 to Umezu et al (“Umezu”). Claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tanaka, Miyahara, Bourdoncle, and Umezu in view of U.S. Publication No.

2003/0140309 to Saito et al. (“Saito”). Claim 8 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tanaka, Miyahara, Bourdoncle, and Umezu in view of U.S. Application Publication No. 2003/0231163 to Hanon et al. (“Hanon”). The Applicant respectfully traverses these grounds of rejection.

Independent claim 1 recites:

An update method performed by a server and a control device of a navigation apparatus for updating search data used in the navigation apparatus, the update method comprising:

providing, by the server, initial search data comprising search tree data having a tree structure and a plurality of sets of initial substance data specified based upon the search tree data, wherein the initial substance data include facility information;

providing, by the server, update search data comprising a set of update substance data, wherein the update substance data are stored in a non-tree structure, have an index as a search key, include facility information, and do not include data specified based upon search tree data, separately from the initial search data and without updating a set of the initial substance data in the initial search data or adding a set of initial substance data to the initial search data; and

executing, by the control device, a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the index of the update substance data.

As discussed in the Reply dated June 2, 2010, Tanaka discloses that both the original search data (shown in FIG. 7A) and the new search data (shown in FIG. 7B) have a tree structure. Therefore, Tanaka fails to teach or suggest that “the update substance data are stored in a non-tree structure, have an index as a search key, include facility information, and do not include data specified based upon search tree data,” as recited in claim 1. (emphasis added). Further,

Tanaka fails to teach or suggest executing “a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the index of the update substance data,” as recited in claim 1 (emphasis added). On the contrary, as the Office Action acknowledges, Tanaka does not disclose update substance data that have an index as a search key, or using the index to execute an index-based search.

In addition, the Applicant submits that Miyahara fails to remedy the deficient teachings of Tanaka. Miyahara merely discloses that map data includes a group of layers, each of which is divided into blocks (§ [0081]). To update the map data, individual layers or blocks may be replaced with new data (§ [0083]). Therefore, Miyahara does not teach or suggest providing initial search data and update search data separately, as recited in claim 1. Further, as the Office Action acknowledges, Miyahara fails to teach or suggest executing “a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the index of the update substance data,” as recited in claim 1.

Also, the Applicant submits that Bourdoncle fails to remedy the deficient teachings of Tanaka and Miyahara. Bourdoncle discloses a searching tool for searching and retrieving information on the Internet. In one embodiment, a database of entries is provided, and the entries are mapped to a set of categories (§ [0022]). The categories may be organized in a tree structure (§ [0070]). In another embodiment, the database may include an inverted index, in which the

categories are entries of the inverted index (§ [0027]). However, Bourdoncle does not teach or suggest separately providing initial search data (comprising search tree data having a tree structure and a plurality of sets of initial substance data specified based upon the search tree data) and update search data (comprising a set of update substance data that are stored in a non-tree structure and have an index as a search key), as recited in claim 1. Further, Bourdoncle fails to teach or suggest executing “a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the index of the update substance data,” as recited in claim 1 (emphasis added). Specifically, Bourdoncle fails to teach or suggest executing a tree-based search of initial substance data, and also executing a separate index-based search of update substance data, wherein the initial substance data and the update substance data are provided separately.

Further, the Applicant submits that Umezu fails to remedy the deficient teachings of Tanaka, Miyahara, and Bourdoncle. Umezu discloses a map data processing unit that is capable of updating map data (col. 1, lines 44-48). However, Umezu does not disclose search data. Therefore, Umezu does not disclose update search data comprising update substance data, as recited in claim 1. More specifically, Umezu does not disclose update substance data that are stored in a non-tree structure, as maintained in the Office Action.

Umezu discloses a batch update method and a dynamic update method for updating the map data (col. 4, line 60 – col. 5, line 19). In both methods the map

data are updated by using update data having the same format as the map data (col. 5, line 56 – col. 6, line 2). Therefore, Umezu fails to teach or suggest executing “a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the index of the update substance data,” as recited in claim 1 (emphasis added). Specifically, Umezu fails to teach or suggest executing a tree-based search of initial substance data, and also executing a separate index-based search of update substance data, wherein the initial substance data and the update substance data are provided separately.

The Applicant submits that claim 1 is patentable over Tanaka, Miyahara, Bourdoncle, and Umezu for at least the reasons discussed above, as well as its additionally recited features. Because independent claims 3 and 13 recite features similar to those discussed above with regard to claim 1, the Applicant submits that claims 3 and 13 are patentable over Tanaka, Miyahara, Bourdoncle, and Umezu at least for similar reasons, as well as their additionally recited features. Further, claims 2, 4, 5, and 9-12 are patentable over Tanaka, Miyahara, Bourdoncle, and Umezu at least by virtue of their respective dependencies on claims 1 and 3, as well as their additionally recited features.

Further, Saito and Hanon fail to remedy the deficient teachings of Tanaka, Miyahara, Bourdoncle, and Umezu, and are not cited as allegedly disclosing the features discussed above. Therefore, claims 6 and 7 are patentable over Tanaka, Miyahara, Bourdoncle, Umezu, and Saito at least by virtue of their

dependencies on claim 3, as well as their additionally recited features. Further, claim 8 is patentable over Tanaka, Miyahara, Bourdoncle, Umezu, and Hanon at least by virtue of its dependencies on claim 3, as well as its additionally recited features.

IV. Conclusion

If there are any questions regarding this Reply or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323, Docket No. 029267.58056US.

Respectfully submitted,

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/Suzanne C. Walts/

Jeffrey D. Sanok
Registration No. 32,169

Suzanne C. Walts
Registration No. 60,831

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
JDS/SCW:gs